

Moderate local freshets early in the month over the Pascagoula system of Mississippi and Louisiana were well forecast and there was neither loss nor damage reported. Warnings were also issued for the flood stages that were reached during the third week of the month in the Tennessee River at Knoxville, Tenn., and Riverton, Ala., and in the upper Kentucky River. There was no damage reported.

The flood in the Barren and Green Rivers of Kentucky was somewhat more pronounced, and at the close of the month it was still in progress over the lower reaches. Warnings were issued well in advance of the flood and no damage was reported.

There were no other floods of consequence, although on account of heavy rains at headwaters and large accumulation of snow at lower levels, conditions became somewhat threatening early in the month in the Calaveras, Cosumnes, and Mokelumne Rivers of California. Due warning was given and no damage resulted.

#### MEAN LAKE LEVELS DURING FEBRUARY, 1922.

By UNITED STATES LAKE SURVEY.

[Detroit, Mich., Mar. 6, 1922.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes. <sup>1</sup>			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during February, 1922:				
Above mean sea level at New York.....	Feet. 601.43	Feet. 579.23	Feet. 571.17	Feet. 244.70
Above or below—				
Mean stage of January, 1922.....	— .19	— .09	— .31	— .03
Mean stage of February, 1921.....	— .33	— .61	— .68	— .76
Average stage for February, last 10 years.....	— .48	— .76	— .47	— .83
Highest recorded February stage.....	— 1.05	— 3.49	— 2.58	— 2.97
Lowest recorded February stage.....	+ .67	+ .07	+ .54	+ .87
Average relation of the February level to:				
January level.....		.00	— .10	.00
March level.....		— .10	— .10	— .20

<sup>1</sup> Lake St. Clair's level: In February, 573.25 feet.

#### EFFECT OF WEATHER ON CORPS AND FARMING OPERATIONS, FEBRUARY, 1922.

By J. WARREN SMITH, Meteorologist.

The greater part of February, 1922, was extremely cold and unfavorable for stock and outdoor operations in the Northwestern States, especially in North Dakota and Montana. It was warm for the season in the Cen-

tral and the Southern States where considerable farm work was accomplished, although there was some delay by frequent rains and wet soil in the Central and the East Gulf States. Field work was delayed in California by rains the latter part of the month, but some sugar-beet planting was done there and bean planting was begun. Some corn was planted in the Gulf States and cotton planting was begun in extreme southern Texas at about the average date.

The severe drought that had prevailed throughout the fall and winter months in the Southwest continued until the latter part of February, when it was brought to an end by general precipitation in most districts. Good snows occurred in Kansas and general rains were received in Oklahoma. Wheat and ranges were greatly benefited and material improvement was reported by the end of the month. The weather continued favorable for wheat and other fall-sown grains in the Central and the Eastern States and they continued generally in satisfactory condition in these sections.

Spring-oats seeding made satisfactory progress in the South the latter part of the month, but this work was stopped in the central Plains area by heavy precipitation during the last few days.

The month was favorable for the growth of most truck crops in the Gulf and South Atlantic States, except that some damage was done by frost in northern Florida and it was somewhat too warm there for celery and lettuce during the first part. Winter truck was badly injured by frost in California during the first week of the month.

The cold weather and snow-covered ranges were unfavorable for stock in the Northwestern States, the severe storm and extremely cold weather the latter part of the month being especially harmful. There was much loss of stock in North Dakota, and it suffered greatly in South Dakota, Montana, and Wyoming. The precipitation the latter part of the month caused marked improvement in ranges in most lower Great Plains grazing areas while pastures improved in the Central and the Southern States.

The mild weather developed fruit trees rather rapidly in the Southern States and by the close of the month early deciduous fruits were blooming in the Gulf Coast districts with a few blossoms coming out as far north as South Carolina. Fruit trees were badly damaged in the western Lake region by a severe ice storm the latter part of the month, especially in north-central Michigan where orchards were almost denuded of branches over considerable areas. Citrus fruit trees made good growth in Florida and produced a heavy bloom, while the harvest of navel oranges was general in southern California.